

Appl. No. 09/649,121  
Amendment dated January 29, 2004  
Reply to Office action of October 29, 2003  
Docket No. 6169-170

IBM Docket No. BOC9-2000-0037

### REMARKS/ARGUMENTS

These remarks are made in response to the Office Action of October 24, 2003 (Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due.

In paragraphs 1 and 2 of the Office Action, claims 1-4, 10, 16-19, 24-27, 33, 39, and 40-42 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Number 6,363,421 to Barker *et al.* (Barker). In paragraph 3 and 4 of the Office Action, claims 5-9, 11, 13-15, 20-23, 28-32, 34, 36-38 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Barker in view of "JAVA Management Extensions Instrumentation and Agent Specification, V. 1.0" (Sun). In paragraph 5 of the Office Action, claims 12 and 35 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Barker in view of Sun in further view of U.S. Patent Number 6,633,923 to Kukura *et al.* (Kukura).

In response to the Office Action, Applicants have amended claims to elucidate the claimed subject matter in accordance with the intended scope of the Applicants' teachings. The scope of the Applicants' claimed subject matter extends to managing software objects executing within virtual machines hosted upon a multitude of distributed servers. The software objects being managed are compiled machine-independent code objects and the virtual machines are software machines used to interpret the compiled code objects for the platform upon which the virtual machines are hosted.

Specifically, claims 1, 10, 16, 24, 33, and 39 have been amended to clarify that the first application host and the remote application hosts are software machines configured to interpret compiled machine-independent code. Claims 1, 10, 24, and 33 also clarify that the second application host is a software machine. Claims 2, 17, 25, and 40 have been amended to clarify that each of the first application host, the second application host, and the remote application host can be Java Virtual Machines. Support for these amendments can be found in FIG. 3 and the corresponding detailed description of the Applicants' specification.

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Claim 8 has been amended to clarify that the master agent comprises an MBean server as detailed by master agent 321 in FIG. 3 as well as the corresponding detailed description. Claims 3, 4, 18, 19, 26, 27, 41, and 42 have been canceled.

Additionally, claim 47 has been added to clarify that the master agent can act as a communication intermediary and that communications between the application manager, the master agent, and the mini-agents can utilize a common remotely accessible communication protocol. Claim 5 has been made dependent upon claim 47. Support for claim 47 is inherent in claim 5 and is detailed in FIG. 3 by the application manager 303, the master agent 321, and the mini-agent 320 as well as the corresponding detailed description. No new matter has been added as a result of these amendments.

 In response to the 35 U.S.C. § 103(a) rejection, Applicants have enclosed affidavits under 37 C.F.R. § 1.131 supporting the removal of Sun as a reference. The affidavits are accompanied by a copy of the Applicants' confidential invention disclosure entitled "A Method of Splitting a Java Management Extensions (JMX) Agent between Java Virtual Machines (JVM)s or Hosts". The confidential invention disclosure and affidavits demonstrate proof of conception for the claimed subject matter of the Applicants' invention at least as early as April 24, 2000, which predates the effective date of Sun that is May, 3, 2000. Applicants further exercised due diligence from prior to the effective date of Sun until August 26, 2000, the filing date of the instant application. Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejection with respect to claims 5-9, 11, 12, 13-15, 20-23, 28-32, 34-38 is respectfully requested.

Prior to addressing the rejections on the art, a brief review of the Applicants' invention is in order. The Applicants' claimed and disclosed subject matter teaches a system, a method, and an apparatus for remote management of machine-independent compiled software objects interpreted by software machines distributed across multiple hosts. The system can include an application manager, a master agent, and a plurality of mini-agents, which can communicate management commands directed to manageable resources which are received from the application manager. Significantly,

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the mini-agents can reside in application hosts separate from the application hosts in which the application manager and master agent reside. In this way, the application manager can issue management commands to the master agent which, in turn, can direct the management commands to appropriate mini-agents for ultimate delivery to the manageable resources residing in various, separate application hosts. Consequently, the Applicants teach an architecture that in one embodiment can open up a standard JMX interface by adding remote access and management capabilities to JVMs.

Turning specifically to the rejections on the art, in paragraphs 1 and 2 of the Office Action, claims 1-4, 10, 16-19, 24-27, 33, 39, and 40-42 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Barker. Applicants respectfully disagree and assert that the claims as amended are not anticipated by Barker.

Barker discloses a system for remotely managing a telecommunications network via the Internet. Baker's system is a Simple Network Management Protocol (SNMP) based management system, where SNMP is a set of standards for communicating with network equipment like routers, bridges, hubs, and other such hardware. Accordingly, Barker addresses a different problem space than that of the Applicants invention, which relates to managing software components and not hardware components. Accordingly, Barker teachings are different from the Applicants' teachings.

Regarding independent claims 1, 10, 16, 24, 33, and 39, the element management system server 32 of Barker has been equated with the master agent of claim 1. The two are quite dissimilar. The element management system server 32 of Barker is a GUI server that exists to provide a GUI to a client and to bridge the client protocol of HTTP to SNMP for the underlying network elements. In contrast, the master agent of claim 1 is a software object residing within a host (page 13 lines 18-22), where the host is a software machine configured to interpret compiled machine-independent code.

Teachings relating to the element management system of Barker are unrelated to the Applicants' invention as claimed. For example, the element management system

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server 32 as noted at column 4 lines 37 to 39 executes applications to serve information to clients via CORBA middleware. In another example, as noted at column 4, lines 43-44, communication between the element management system and the managed elements is via SNMP. As these examples show, Barker fails to teach or suggest the Applicants' invention as currently claimed.

the teachings of Barker have no bearing and provide no meaningful teachings applicable to the Applicants invention.

Regarding claims 2, 17, 25, and 40, column 5, lines 3-8 have been cited as teaching that each host is a JVM. Barker in fact, teaches that a client computer can include a Web browser and Java applets executable upon the Web browser for the management console GUI. In Barker, the element management system client is not a software object but is, instead, a hardware device. Accordingly, the client cannot be a JVM. Further, the element management system server and application processors that have been equated to other hosts for purposes of the referenced claims are hardware devices that are not capable of being JVMs.

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

Date: 29 Jan 2004

  
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